

Title (en)  
POSITIVE ELECTRODE ACTIVE MATERIAL FOR SECONDARY CELL HAVING NON-AQUEOUS ELECTROLYTE, POSITIVE ELECTRODE FOR SECONDARY CELL HAVING NON-AQUEOUS ELECTROLYTE, AND SECONDARY CELL HAVING NON-AQUEOUS ELECTROLYTE

Title (de)  
POSITIVELEKTRODENAKTIVMATERIAL FÜR SEKUNDÄRZELLE MIT WASSERFREIEM ELEKTROLYT, POSITIVELEKTRODE FÜR SEKUNDÄRZELLE MIT WASSERFREIEM ELEKTROLYT UND SEKUNDÄRZELLE MIT WASSERFREIEM ELEKTROLYT

Title (fr)  
MATÉRIAU ACTIF D'ÉLECTRODE POSITIVE POUR ACCUMULATEUR AYANT UN ÉLECTROLYTE NON AQUEUX, ÉLECTRODE POSITIVE POUR ACCUMULATEUR AYANT UN ÉLECTROLYTE NON AQUEUX, ET ACCUMULATEUR AYANT UN ÉLECTROLYTE NON AQUEUX

Publication  
**EP 3734719 A4 20210303 (EN)**

Application  
**EP 18895970 A 20181214**

Priority  
• JP 2017252476 A 20171227  
• JP 2018046007 W 20181214

Abstract (en)  
[origin: EP3734719A1] The positive electrode active material for a nonaqueous electrolyte secondary battery contains lithium composite oxide A containing W and Ni and W-free lithium composite oxide B containing Ni. Regarding the lithium composite oxide A, the proportion of Ni relative to the total moles of metal elements except for lithium is 30 to 60 mol%, 50% particle size D50 is 2 to 6 µm, 10% particle size D10 is 1.0 µm or more, and 90% particle size D90 is 6.8 µm or less. Regarding the lithium composite oxide B, the proportion of Ni relative to the total moles of metal elements except for lithium is 50 to 95 mol%, 50% particle size D50 is 10 to 22 µm, 10% particle size D10 is 7.0 µm or more, and 90% particle size D90 is 22.5 µm or less. The mass ratio of the lithium composite oxide B to the lithium composite oxide A is 1:1 to 5.7:1.

IPC 8 full level  
**H01M 4/525** (2010.01); **C01G 53/00** (2006.01); **H01M 4/36** (2006.01); **H01M 10/052** (2010.01); **H01M 4/02** (2006.01)

CPC (source: EP US)  
**C01G 53/42** (2013.01 - EP); **C01G 53/44** (2013.01 - EP); **C01G 53/50** (2013.01 - US); **H01M 4/364** (2013.01 - EP US); **H01M 4/505** (2013.01 - US); **H01M 4/525** (2013.01 - EP US); **H01M 10/052** (2013.01 - EP); **H01M 10/0525** (2013.01 - US); **C01P 2002/52** (2013.01 - EP US); **C01P 2002/54** (2013.01 - EP); **C01P 2004/51** (2013.01 - EP); **C01P 2004/61** (2013.01 - EP US); **C01P 2006/12** (2013.01 - EP); **C01P 2006/40** (2013.01 - US); **H01M 2004/021** (2013.01 - US); **H01M 2004/028** (2013.01 - EP US); **Y02E 60/10** (2013.01 - EP)

Citation (search report)  
• [A] WO 2017203420 A1 20171130 - UMICORE NV [BE], et al  
• [AD] JP 2011113825 A 20110609 - HITACHI LTD  
• [A] JP 2013222693 A 20131028 - TOYOTA MOTOR CORP  
• See references of WO 2019131194A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3734719 A1 20201104**; **EP 3734719 A4 20210303**; **EP 3734719 B1 20220323**; CN 111033829 A 20200417; CN 111033829 B 20230509; JP 7245785 B2 20230324; JP WO2019131194 A1 20210107; US 11552287 B2 20230110; US 2021083270 A1 20210318; WO 2019131194 A1 20190704

DOCDB simple family (application)  
**EP 18895970 A 20181214**; CN 201880052379 A 20181214; JP 2018046007 W 20181214; JP 2019562986 A 20181214; US 201816640292 A 20181214